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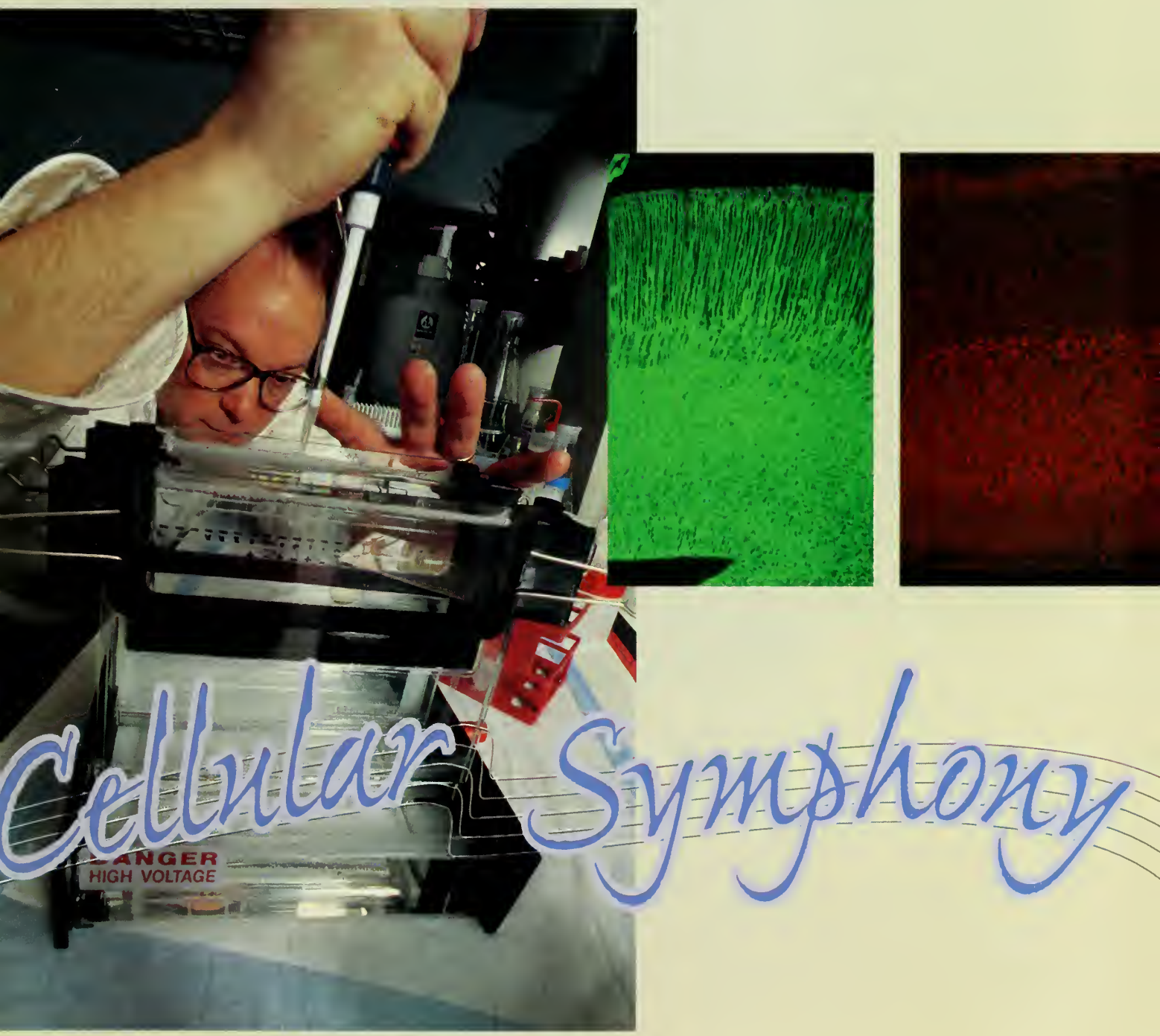
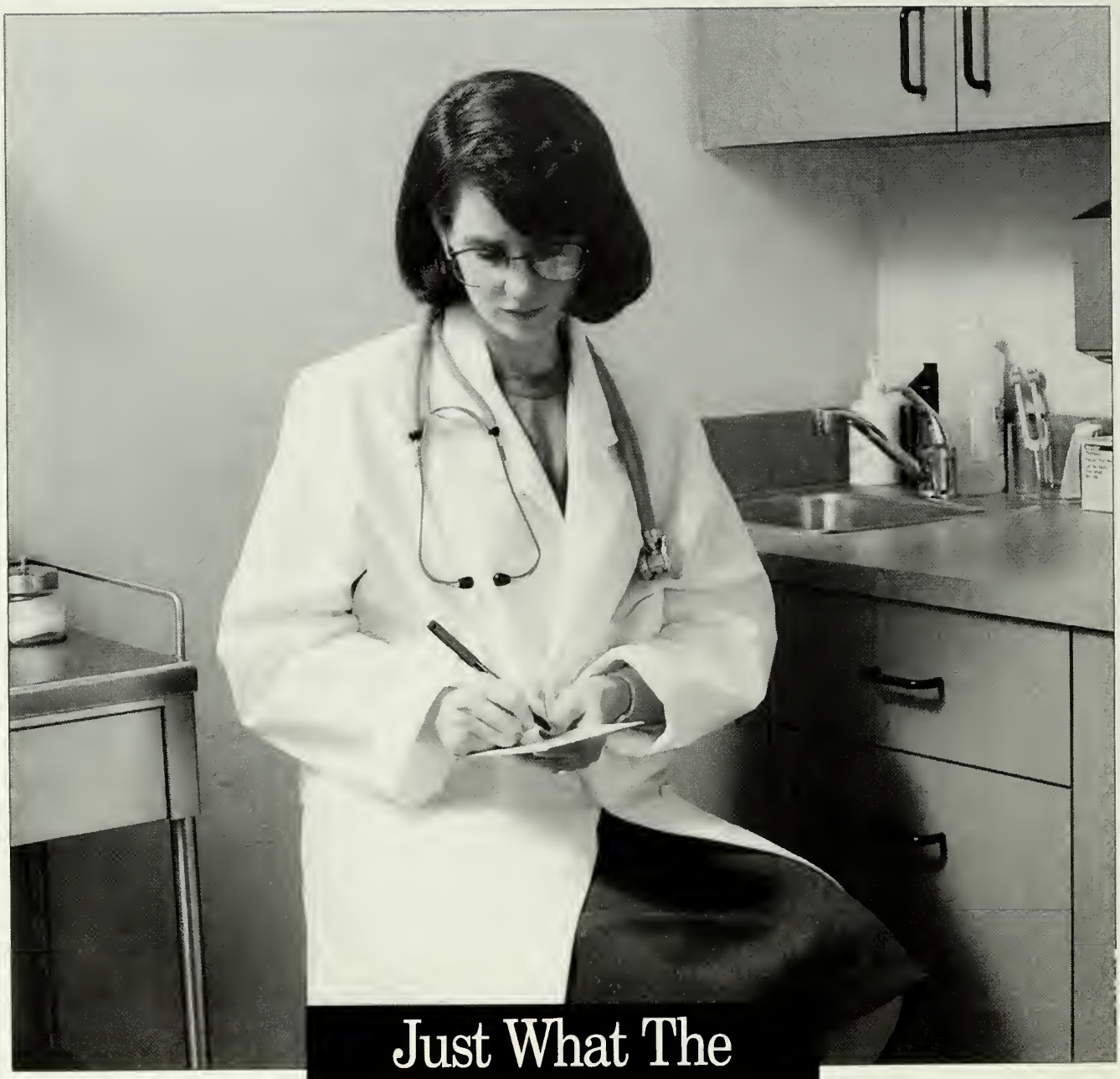
Today

Volume 25, Number 4 Summer 1997



Cellular Symphony



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Introduction

Some of the most esoteric concepts in health care have some of the most easily understandable implications.

Consider, for instance, leptin—a substance that, while incredibly complicated, is shedding light on weight loss and reproduction, subjects of passionate interest to millions of Americans.

Or consider a genetically engineered virus that offers new hope for those with brain tumors.

Articles in this edition of *Medical College of Georgia Today* offer overviews of both of those areas of research, including the potential impact of the research on the public.

On the other hand, some MCG achievements aren't esoteric at all—simply awe-inspiring. Such is the case with Dr. Bill Stenstrom, who at the tender age of 70 recently scaled Mount Kilimanjaro. We hope our account of his adventure will make you feel almost as if you've just climbed a mountain yourself—sans the sore muscles.

And please don't forget to read the latest installment of our regular series, *Plan Your Giving*. Each article is packed with practical information about maximizing your assets, and perhaps investing in MCG's future while you're at it. Those two goals are wonderfully compatible, as MCG's Director of Planned Giving makes clear. Interested in learning more? Call Bruce Howerton, Director of Planned Giving, at 1-800-869-1113.

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A virus' ability to infect a cell has doctors at the Medical College of Georgia using a genetically engineered virus to target deadly brain tumor cells for destruction.

"We are investigating the potential for a whole new way of delivering medication that makes use of gene transfer technology to selectively target tumor cells for destruction," said Dr. James Fick, MCG neurosurgeon and researcher specializing in brain tumors.

In the brain, more than any other organ, location can limit conventional treatment of tumors because different areas of the brain have different functions, Dr. Fick said. Depending on location, a surgeon might not be able remove the tumor without creating major deficits such as loss of sight, movement or speech. Clinicians also are limited in the amount of radiation they can give without injuring the brain or chemotherapy they can administer without producing harmful side effects.

MCG is one of 40 centers worldwide investigating a new approach to treating newly diagnosed glioblastoma multiforme, the most malignant tumor that arises from glial cells that support neurons in the brain.

For some unknown reason these glial cells, found throughout the brain and the spinal cord, sometimes go awry. "Think of them as cells

TARGETED FOR DES

with unregulated growth that begin to replicate quickly and as they do so, they spread and invade into the surrounding brain," Dr. Fick said.

The result is a rapidly growing, durable tumor that often rebounds from the conventional therapies of surgery, radiation and chemotherapy; the median survival is 50 weeks and victims tend to be in their 40s and 50s. Even when surgery is considered successful and the patient does well afterward, most of these tumors recur near their original location, Dr. Fick said.

"A complete removal of this tumor can result in an excellent postoperative brain scan, yet the tumor has a propensity to recur within two inches of where it was originally located," Dr. Fick said. "In these cases, we fail because we cannot control the local growth of tumor."

In the study, MCG is helping investigate whether a virus capable of seeking rapidly dividing brain tumor cells and rendering them susceptible to an antiviral drug can improve quality of life for these patients and prolong their survival by preventing local tumor recurrence.

A virus requires a living cell to replicate; that's how the cold virus multiplies and spreads. For this therapy, mouse skin cells are used to manufacture a genetically engineered virus that has been disabled so it cannot replicate, but it can infect tumor cells, Dr. Fick said.

A specific characteristic of this genetically engineered virus, known as a retroviral vector, is that it carries with it the thymidine kinase gene from a second virus, the herpes simplex virus. This gene can only be transferred into rapidly dividing cells where it turns an antiviral drug patients will get later—called a prodrug—into a toxin that destroys the cell.

What happens is that patients have surgery to remove the tumor, then surgeons inject 1 billion of these retroviral vectors into the surgery site. Two weeks later, when the virus has had time to carry the gene into the tumor cells, patients begin receiving the prodrug, ganciclovir, intravenously. Afterward they receive radiation therapy.

"This particular type of virus has the potential to be used to transfer genes into brain tumor cells because they are the primary cells in the brain replicating," Dr. Fick said. "It is believed that even if the virus infects all the cells, it can only transfer genes into the replicating or tumor cells." Dr. Fick said.

In the international trial, half the patients get the gene therapy and half get today's standard treatment of surgery followed by radiation therapy. However, this is a crossover trial which means if standard therapy fails, and it always does with these tumors, patients also will be eligible for gene therapy, Dr. Fick said.

—TONI BAKER

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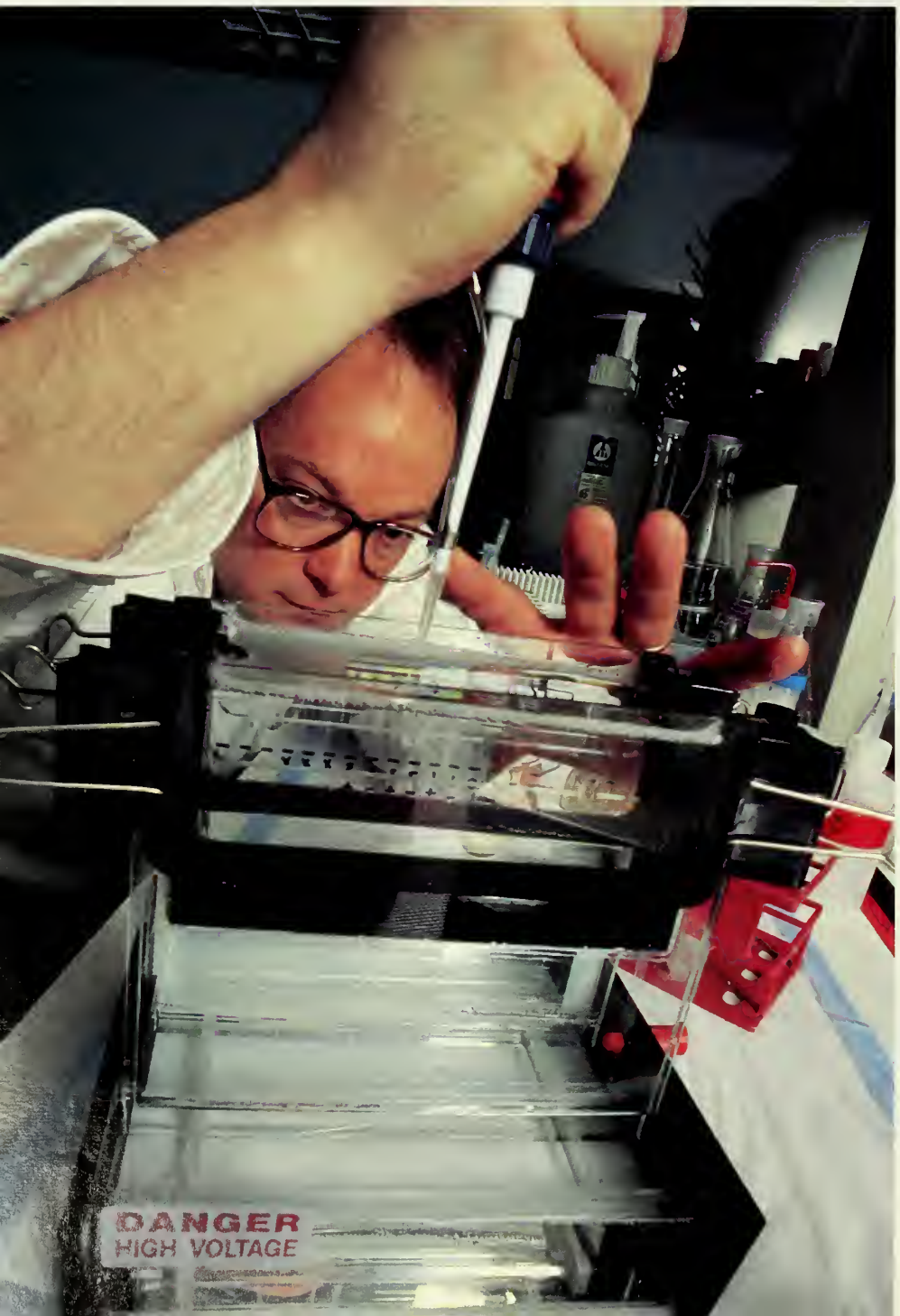
Cellular Symphony



As a musician plays the violin, the area of his brain responsible for that talent is awash with cellular activity.

The sophisticated technology of functional magnetic resonance imaging can document such work as spots of color on a screen.

While the not-too-musical Dr. Richard S. Cameron might create a less-colorful display as he tries to play the violin, such documentation of brain cells in a specific place performing a specific function is music to his ears.

"I'm trying to elucidate how a brain is built from a molecular and cellular point of view," said Dr. Cameron, cell biologist in the Institute of Molecular Medicine and Genetics at the Medical College of Georgia.

He's studying central nervous system development: how exponential cell proliferation in a developing fetus ultimately results in an organized adult brain with 100 billion neurons.

"Everything you think about, there are parts of your brain devoted to that function. Every space in the neocortex has sets of neurons that carry out different functions. Some will meet the ability to speak proper nouns; some will meet the ability to speak regular nouns, some will meet the ability to speak verbs. It's what we call localization of function," Dr. Cameron said. And the development of the endless functions of the brain is on a tight and unforgiving time line.

Largely because of recent improved imaging technology, such as the functional MRI, it's becoming clear that many problems with the brain, such as idiopathic epilepsy, cognitive dysfunctions and learning disabilities, may result from cells that didn't quite get to the right place at the right time.

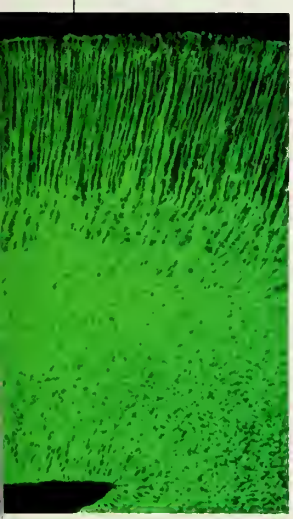
Scientists have known for many years that major problems with cell migration

resulted in fetuses that were not born, babies that died shortly after birth or survivors with profound mental retardation. "In recent years we've begun to appreciate that there is a whole different spectrum of migration deficits, minor migration deficits and that their consequence in terms of normal neurological function also may be detrimental," Dr. Cameron said.

Many scientists consider the brain the most complex structure in the universe, acknowledging that what we don't know about the brain is massive and that what we do know is rapidly expanding volumes, he said.

His focus is the little-understood but extremely important aspect of central nervous system development that takes newly made neurons with no specific function and gets them to the right place where they'll later be wired together as functioning neuronal circuits with specific jobs to do.

The rationale is that to deal with problems of mal-migration of cells, you must first understand how they normally get where they are supposed to go.



As cells exit the state of rapid proliferation called mitosis, they selectively recognize and attach themselves to a radial glial cell, a sort of tour guide that exists only during embryogenesis. Radial glial cells then take these postmitotic neurons to their appropriate destination in the developing brain.

Velcro-like adhesive proteins on the radial glial cells seem to attract the neurons so they can travel to a specific area in the brain. There is no easy answer to how the new neurons know their job and where they will do it. The adhesive protein may know; at that stage of development, the neurons themselves may know; possibly both are true.

But what happens when the neurons don't migrate properly is all too clear. "If the recognition mechanism of a postmitotic neuron to a radial glial cell is aberrant or its ability to migrate on that radial glial cell is aberrant, then it's not going to the right place and the likely result is multiple, developmental anomalies," Dr. Cameron said.

What goes awry with the adhesion proteins to affect brain formation also may impact the later relationship of neurons with mature forms of glial cells, which become the lifelong partners of functioning neurons about the same time the radial glial cells go away. These glial cells function to maintain the neuron's local environment. The formation of this intimate relationship results from some of the same proteins that adhere neurons to radial glial cells during development. A devastating glial cell tumor may be one potential result of a problem with one of these proteins in the developed brain.

"We know many of the general adhesion proteins or glues for building the nervous system," Dr. Cameron said, many of which were identified in similar studies carried out in the immune system.

But in the complex, diverse brain it's suspected there are many still unknown "glues" that hold together subsets of cells which perform very specific functions such as those that mediate musical ability.

In studies funded by the National Institute of Neurological Diseases and Stroke, Dr. Cameron has identified several membrane proteins that function in the selective recognition and adhesion events that take place between early postmitotic neurons and radial glial cells.

"In the laboratory setting, antibodies to these cell surface proteins inhibit movement of the postmitotic neurons along the radial glial cell guides, thus that part of the brain fails to assemble correctly," he said. "In recent years, several laboratories have identified other defective adhesion proteins as the underlying cause of certain types of neuronal cell migration disorders."

The proteins Dr. Cameron has found appear to be members of a new family his research team has dubbed neuronal glial junctional membrane proteins. "Our approach is an experimental one to identify in the laboratory the proteins that may have a similar adhesive function in the developing human brain. That's what we are after."

—TONI BAKER

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AlumNews

Distinguished Alumni Honored During Homecoming

Christine Hurley Deriso

The Medical College of Georgia honored distinguished alumni from each of its five schools during Homecoming May 1-4.

The School of Allied Health Sciences Alumni Association honored Gaye W. Cronin, owner and President of RehabSource Inc. in Atlanta, a company specializing in various aspects of rehabilitation. Ms. Cronin, who also is Director of the Atlanta Ear Clinic's Vestibular Rehabilitation, Sensory Integration and Physical Rehabilitation Programs, earned a bachelor's degree in occupational therapy and a master's degree in health education from MCG. She is a member of the American Occupational Therapy Association and Georgia Occupational Therapy Association.

The School of Dentistry Alumni Association honored Dr. Isaac S. Hadley, who has a private practice in general dentistry in Columbus, Ga. Dr. Hadley, who earned his dental degree from MCG in 1974, is a member and past President of the Georgia Board of Dentistry. He is a Fellow of the American College of Dentists and an Honorable Fellow of the Georgia Dental Association. He was named the 1996 Man of the Year by the Men's Progressive Club of Columbus.

The School of Graduate Studies Alumni Association honored Dr. David O. Wood, Professor of Microbiology and Immunology at the University of South Alabama. Dr. Wood earned a master's degree in the Department of Cell and Molecular Biology from MCG in 1975 and a Ph.D. in the department in 1978. He is a past President of the American Society for Microbiology's Southeastern Branch and a past Vice President of the American Society for Rickettsiology and Rickettsial Diseases. He was named a Distinguished Faculty Member by the University of South Alabama classes of 1990 and 1991.

MCG President Francis J. Tedesco (second from left) with 1997 Distinguished Alumni: Dr. James W. Bennett (far left), Dr. Gail C. Mornhinweg and Dr. David O. Wood. (Not pictured: Distinguished alumni Gaye W. Cronin, Dr. Isaac S. Hadley, Dr. Melvin Spira and Eugene James Murdock Jr.)

Dr. James W. Bennett received the 1997 Distinguished Alumnus Award for Loyalty from the Alumni Association of the School of Medicine of the Medical College of Georgia Inc. Dr. Bennett, an MCG Professor of Pediatrics, earned a medical degree from MCG in 1946. He was named the 1994 Pediatrician of the Year by the Georgia Chapter of the American Academy of Pediatrics and is a member of the American Medical Association and the Medical Association of Georgia.

Dr. Melvin Spira received the 1997 Distinguished Alumnus Award for Professional Achievement from the Alumni Association of the School of Medicine of the Medical College of Georgia Inc. Dr. Spira, who earned a medical degree from MCG in 1956, is a Professor of Plastic Surgery at Baylor College of Medicine. He is a Fellow of the American College of Surgeons and the American Academy of Dental Medicine. He was named the Houston Surgical Society's Distinguished Surgeon of 1996 and won the Texas Society of Plastic Surgeons' 1996 Distinguished Service Award.

Eugene James Murdock Jr. received the School of Nursing Alumni Association's Phoebe

...continued on page 18

1997 School of Allied Health Sciences Distinguished Alumna Gaye W. Cronin (left) and Dana Jones, SAHS Alumni Association President

Project Holds Key to Patient Confidentiality

Susan Yarborough

When 12 seniors in the Medical College of Georgia Health Information Management program gave Melissa Jarriel a bill for project consulting fees recently, it was a joke. But the project they were billing for was not.

March 12, the seniors gave Ms. Jarriel, Director of MCG Health Information Management Services, a security access plan for a medical record viewing system being developed by HIMS and the MCG Information Services Division.

HIM seniors Jennifer Bacon, Dana Bailey, Jim Condon, Deidre Cook, Cindy Jackson, Heather Mallett, Crystal Sandlin, Amir Shaikh, Brannon Smith, Kendra Vickers, Tammy Wright and Theresa Youmans divided into six teams for the 10-week project. The students' plan focused on who would need access to the Transcription Inquiry System.

TIS is a computer application to view transcribed medical documents such as discharge summaries, operative notes, clinic notes and referral letters. When implemented, the system is expected to improve the efficiency of patient care and billing by giving medical staff and billing personnel quicker access to relevant patient information.

HIM instructor Mariann Ogilvie provided expertise in computer technology and information security. Sherry Smith, an MCG HIM graduate and a registered record administrator, was project manager, sharing her knowledge as a health information manager. The group communicated closely with Connie Smith, Assistant Director of HIMS, throughout the project.

"The class included extensive sessions on computer security, and the project fit right in with what the students were learning," Ms. Ogilvie said. "The students were able to apply what they were learning to a real-world problem."

"TIS will bring MCG one step closer to a computerized patient record," Ms. Smith said. "And it's important for the students to have experience in what's being done in health care organizations right now."

As the students learned in their project research, a major concern in devising a computer security system for health-related information is to make confidential information available to people who need it while preventing access by unauthorized individuals.

The threat of breaches in security and confidentiality is greater from within a health care organization or facility than it is from outside. The biggest danger isn't from teen-age computer hackers out for a thrill, but from staff members who see and disclose information about someone they know—a family member, relative or neighbor.

The students did an extensive literature search on computer security related to health information, developed a detailed picture of patient information processing at MCG, including who handles what kind of information, and reviewed the TIS design.

They developed a questionnaire to determine needs for TIS access and to estimate system utilization and used it in interviewing managers in 14 MCG departments. The interview data helped them develop access criteria and a TIS access application form and confidentiality statement.

The students also proposed a system implementation schedule and security safeguards, including an audit trail that would allow system managers to see who had accessed what information when.

The students provided Ms. Jarriel with a formal report of their recommendations.

"The TIS project exposed us to tasks which might be expected of us during the course of our careers," said HIM senior Jim Condon. "We were in the position of depending upon others as well as being depended on to continue and complete the project. We were expected to deliver a professionally done, quality product, on time and according to specifications. I think we accomplished that."

"As an alumna of the HIM program at MCG, this project has made me appreciate the efforts of [Department of HIM Chairman Charlotte] Johnston and her staff to ensure that students receive experiences directly related to pertinent issues in health information management," said Ms. Smith. "The research, recommendations and general comments [from the students] have already proven helpful to us as we continue the implementation of the Transcription Inquiry System. The students did an excellent job on this project and it was a pleasure working with them." ■

P.A. Program Offers Couple a Midlife Dream

Susan Yarborough

The land around Farmington, N.M., is straight out of National Geographic. It's a land of red sandstone canyons, snow-covered mountains, fast-running streams, ancient ruins and historic romance, all under spectacular skies.

However, as Cathie and Jesse James can tell you, the enchanting landscape can't hide the fact that many people around Farmington are too poor to afford good health care. Poverty blights the Native American reservations nearby and the Hispanic and white populations have both suffered in the boom-or-bust cycles of the oil industry.

For Cathie and Jesse, both juniors in the Medical College of Georgia physician assistant program, the Farmington area is home and one reason they came to MCG. They want to help the people there get better health care.

Jesse is especially familiar with the poverty there because he grew up in it.

"I know what it's like to be without health insurance," he said. "The people I grew up around are usually hurting pretty bad before they'll go to a doctor."

It was the memory of those people and an interest in health care for its own sake that led the Jameses to leave family, home and a comfortable income in midlife to come nearly 2,000 miles to the MCG physician assistant program.

Cathie and Jesse were high school sweethearts and married at 18. Jesse's training in automotive and diesel mechanics at a technical school helped him get a job in the oil industry. Soon he was making a good living operating oil and gas refineries. Jesse went to college at night and Cathie was a full-time mother to their children, Donald and Sara.

Then, at age 23, Cathie developed ulcerative colitis and had to have an ileostomy. Because of her illness, Jesse quit night school to help at home.

"I was so sick and depressed. I thought my life was over," Cathie said. "Then an ostomy volunteer came to talk to me, an attractive young professional woman. I couldn't believe she was wearing an ostomy bag. She told me that the ostomy didn't have to prevent me from doing what I wanted to do."

Her experience as an ostomy patient gave Cathie new determination and an abiding interest in health care. In addition to homeschooling her children, she became an ostomy volunteer her-

Cathie and Jesse James

self, giving talks to hospital personnel and nursing classes.

When daughter Sara was ready for college, Jesse felt his dreams of college reviving. His job as a gas refinery operator didn't challenge him anymore and he sensed that the oil industry was headed for layoffs. Meanwhile, Cathie faced an empty nest and wasn't sure what to do.

Jesse had been thinking about nursing school, when a friend at work told him about physician assistants. He'd never heard of them, but he went straight to the library to find out more. By the time he finished his research, he knew what he wanted to do: become a physician assistant.

"It's funny, but we just knew we would go into health care," said Cathie. "We never really thought about anything else. What appealed to Jesse about the physician assistant profession was the diagnosis and problem-solving. In his job, he really liked to do the trouble-shooting, and it looked like as a physician assistant, he'd be solving problems all the time."

But Jesse also hadn't forgotten the people he knew when he was young.

"It has always been in my heart to help people who are underserved, people who have problems with sickness and don't have the means to get help easily," he said.

In 1992, Jesse, Cathie and Sara all enrolled at New Mexico Junior College in Hobbs. Jesse and Cathie were determined to do whatever it took to get into P.A. school.

From the start, they knew they wanted to attend MCG.

"We had always dreamed of living in the South because it's so beautiful here," Cathie said. "Jesse had visited his grandmother in Florida when he was young. But it was very competitive to get into MCG—more than 800 applicants for only 18 places—and they gave preference to applicants from Georgia."

Although they were soon invited to attend another P.A. program, the Jameses delayed sending their acceptance letters, hoping to hear from MCG. They weren't sorry.

Dr. Bonnie Dadig, Chairman of the MCG Department of Physician Assistant, noted that although MCG gives preference to Georgia residents, it makes an effort to take students from states without physician assistant programs. New Mexico was one of those.

So Cathie and Jesse came to MCG—the first married couple to enroll in the P.A. program—and are delighted that they did. The Jameses feel that being married has been a real advantage in their studies.

"Being together has been really important to us," Cathie said. "We didn't get to spend much time together while the children were growing up, but now we study together and help each other. It's so much fun. We're living it together."

"The program is really intense," Jesse said. "There's a lot of information to learn in a very short time and you really have to dedicate your life to it. But I feel like I'm really being prepared well and I'm enjoying the learning so much."

As busy as their studies keep them, the Jameses haven't lost the community spirit that led them to choose health care. They both serve as class officers, and Jesse helped organize the program's volleyball team.

"Jesse has been like a father figure to me," classmate Adam Tyson said. "When things get stressful, he helps everybody stay focused and reassures us that things are going to be all right."

When classmate Angela McClung's mother was diagnosed with cancer last year, Cathie helped Angela quilt a special Christmas gift.

"My grandmother started a beautiful quilt before she died and I knew my mom would really love to have it finished," Angela said. "Cathie spent hours and hours of her Christmas vacation working with me to get it done. I made a video of Mom getting the quilt to show Cathie how much it meant to her."

P.A. students spend their senior year honing their diagnostic and patient care skills in seven clinical rotations. The Jameses will spend five of their rotations in rural Georgia to prepare them to work in a rural practice when they return to New Mexico. Thanks to Clinical Director Winston Hunt's efforts, they'll be able to stay together, rotating with different doctors in the same towns.

Meanwhile, the Jameses are enjoying a lush Georgia summer.

"It's so green here," Cathie said. "It's like we never experienced the color green before we got here. And all the flowering plants, they're so beautiful. We love it here. And I know we'll feel torn when it's time to leave. We've made some friends for life in Georgia."

However, the Jameses are also eager to get back home to take up the work they came to Georgia to learn.

"I'm really excited about going back to work with the kind of people I grew up with," Jesse said. "I feel I have a real understanding of them and believe I can make a difference in their care." ■

Dr. Keskula Wins Physical Therapy Award

Susan Yarborough

Dr. Douglas R. Keskula, Assistant Professor of Physical Therapy at the Medical College of Georgia, has received the 1997 Margaret L. Moore Award from the American Physical Therapy Association. Dr. Keskula received the award June 1 at the association's Physical Therapy '97 meeting in San Diego.

The award acknowledges a new faculty member pursuing a career as an academician who has demonstrated excellence in research and teaching. It is named for Margaret L. Moore, former Director of the Division of Physical Therapy at the University of North Carolina at Chapel Hill.

Dr. Keskula earned a bachelor's degree in physical therapy from the State University of New York at Stony Brook, a master's degree in health science from Springfield College and a Ph.D. in education from the University of Virginia. He joined the MCG faculty in 1993.

In 1994 Dr. Keskula received the MCG Student Government Association Award for Outstanding Faculty. He served as a physical therapist at the baseball venue at the 1996 Centennial Olympics and also serves as physical therapist and athletic trainer at the MCG Center for Sports Medicine.

Dr. Bella J. May, founder and former Chairman of the MCG Department of Physical Therapy, nominated Dr. Keskula for the award. ■

8 Dental Students Receive Hinman Scholarships

Carole Jones Smith

Eight Medical College of Georgia students received scholarships from the Thomas P. Hinman Dental Society during the 85th Annual Hinman Dental Meeting in Atlanta March 20-23.

Two-thousand-dollar scholarships were awarded to MCG School of Dentistry students Clifford Johnson, a junior from Norcross, Ga., and Vinh Huynh, a sophomore from Atlanta. Six-hundred and fifty-dollar scholarships were awarded to first-year dental hygiene students Maggie Butts, Augusta, Ga.; Heather Forrister, Odum, Ga.; Denetra Gentry, Dalton, Ga.; Lisa Gonzalez, Locust Hill, Va.; Cindy Head, Carrollton, Ga.; and Michelle Slater, Rome, Ga.

The society presents annual scholarships to dental schools that exemplify quality dental education, and the recipients are nominated by the schools with criteria that includes academic excellence.

"This is the 11th year the Thomas P. Hinman Dental Society has chosen to award scholarships to a selected group of dental and hygiene programs which prioritize quality education and the students that they, in turn, respect," said Dr. Peter A. Jensen Jr., Hinman Board Trustee. "We are proud and delighted to support the efforts of these institutions and students, and look forward to the contributions they will make to the field of dentistry and quality oral care." ■

Dentists Often First to Spot Eating Disorders

Carole Jones Smith

As soon as she walked in the door for her appointment, he recognized the problem. Her face, puffy from persistent swelling of the salivary glands, was thinly covered with downy facial hair, or lanugo.

The diagnosis: bulimia.

Dentists such as Dr. James M. Curtis Jr., Associate Professor of Oral Rehabilitation and Director of the General Practice Residency at the Medical College of Georgia School of Dentistry, are sometimes the first to see symptoms of eating disorders.

Bulimic patients who regurgitate to purge their body leave an acidic residue that alters the pH balance in the mouth. The acids left in the mouth literally dissolve the teeth. People who suffer from esophageal reflux exhibit the same symptoms. The damage to the oral cavity can be devastating.

"Primarily the acid causes damage in the upper teeth which leads to deterioration of enamel," said Dr. Curtis. "After the enamel is destroyed, the destruction travels to the molars, the pre-molars, the bite and then to the occlusion in the lower jaw. After the bite collapses, people over-close their mouth. This causes loose teeth."

Today's puffy-faced patient was a teacher who had already acknowledged her problem with anorexia. After viewing the acidic residue in her mouth, Dr. Curtis asked her if she ever attempted to self-induce vomiting. Reluctantly, the teacher said yes and agreed to undergo treatment.

"Typically, patients presenting these symptoms have something to hide and will not admit there is a problem," said Dr. Curtis. "They are ashamed."

During the teacher's treatment, she requested extraction of almost all her upper teeth with denture replacement. School pictures were scheduled soon, and she wanted to be able to smile for the first time in five years.

"Her self-image was renewed, even though her other problems continued," said Dr. Curtis. "But that's an important first step."

When Dr. Curtis suspects bulimia, he starts with general questions, asking if the patient suffers from heartburn or reflux disease. Then he inquires about eating habits. Sometimes people who sip soft drinks or munch on

School of Dentistry Dean David Myers (far left) and School of Dentistry Alumni Association President Phil Miller present Distinguished Alumnus Award to Dr. Isaac S. Hadley during Homecoming 1997.

lemons can present similar symptoms.

"When confronting a patient, it's important to be sensitive and non-judgmental," said Dr. Curtis. "Most patients deny they are bulimic, but at least the idea is planted that someone suspects something is wrong; they are found out."

That's why Dr. Curtis believes it is important for the entire dental staff to be aware of the symptoms of the diseases. Occasionally patients ask staff members questions they are afraid to ask the dentist, so knowledge is essential in recognizing indications of the disease in order to provide knowledgeable answers.

"The idea is to treat the whole patient and not just their dental problems," said Dr. Curtis. ■

Dr. Schuster Named Consultant

Carole Jones Smith

Dr. George S. Schuster, Chairman and Merritt Professor in the Medical College of Georgia School of Dentistry's Department of Oral Biology, has been appointed a consultant to the Commission on Dental Accreditation of the American Dental Association.

The commission confers dental school accreditations based on eight standards including administration, finance and facilities, faculty and staff, students, curriculum, patient care, research and outcomes.

Dr. Schuster received his doctor of dental surgery and master of science degrees from Northwestern University, his doctor of philosophy degree from the University of Rochester and his bachelor of arts degree from Washington University. He joined the MCG faculty in July 1970. ■

Cranium Holds Key to Successful Dental Implants

Carole Jones Smith

The sturdy bones that surround the brain and face make an excellent source of transplant material for dental implant bone grafts, according to researchers at the Medical College of Georgia School of Dentistry.

Dental implants help preserve jaw bones and are considered better replacements for teeth than dental bridges or dentures for some patients. However, for implants to be successful, patients must have sufficient bone present that sometimes may be lost following teeth extraction. In such cases, cranial bone has proven to be the most effective in constructing bone grafts in the mandible and maxilla, the lower and upper jaw bones, prior to the implant.

According to Dr. Mohamed Sharawy, MCG Professor of Oral Biology, cranial bones are unique because they are formed without cartilage and contain more growth factors than other bones. In bone grafts, this is important because healing time is reduced when new bone is created faster, and host bone cells form new bone quicker without first forming cartilage.

"It's almost like the cranial bone is preserved because it's so important in covering the brain," said Dr. Sharawy. "They are also the only bones in the body not affected by osteoporosis."

After sufficient bone mass is in place, a titanium root implant is placed into the patient's improved jaw bone and then covered by the gum. The implant remains under the gum tissue for four to six months to allow the bone to grow around the implant. Afterward, the implant is uncovered and a post is inserted for the gum to adhere. Approximately one month later, the process ends when a crown is fitted over the implant.

For approximately eight years, Dr. Sharawy and his colleagues searched for bones the right size and durability to use for donor transplants. Experiments with Rhesus monkeys, because their diets, chewing cycles and formulation of teeth are similar to humans, finally proved their theories.

"First we created atrophied [shrunken] mandibles," said Dr. Sharawy. "Then we put in the titanium implant and placed two layers of cranial bone from another monkey around the implant. After about four months, a crown was attached to the implant for the monkey to chew on."

Human experiments proved successful as well. Negotiations are under way with LifeLink of Virginia to provide donor cranial bone. Bone banks perform a series of tests guaranteeing the material is free of HIV infection.

"We are convinced that using [human] cranial bone in bone grafts is the way to go in the future," said Dr. Sharawy. ■

Dental Equipment Offers Instant X-Rays

Carole Jones Smith

From X-rays to computer monitors, new electronic equipment is in use at the Medical College of Georgia School of Dentistry that may eventually change the design of dental offices.

Last July, the school received a Schick Computerized Digital Radiography workstation funded through the MCG/Georgia Institute of Technology Biomedical Research and Education Program. The equipment reduces dental patients' radiation exposure more than 50 percent with instant X-rays viewed via a computer screen.

"It's been calculated to have a 50 to 80 percent dose reduction over the standard dental X-ray film," said Dr. Brad Potter, Associate Professor of Oral Diagnosis and Patient Services. "It also saves a lot of time."

Standard dental X-rays require approximately four and a half minutes to develop; digital radiography equipment takes only three seconds. Immediate feedback benefits not only dentists and patients, but dental students, Dr. Potter said.

"We use mannequins with the students and if they make a mistake using conventional radiography, it takes them five minutes to clearly see their error," said Dr. Potter. "But using digital radiography, it's instantaneous and they can make the adjustment immediately."

The new electronic sensor, encased in a sterile sleeve, is slightly thicker than a standard dental X-ray and has a wire attached to the computer.

"The sensor has a phosphorous plate that illuminates when the X-ray beam strikes it," said Dr. Norman Weller, Associate Professor and Acting Chairman of the Department of Endodontics. "The sensor then electronically feeds the image into the computer system."

Other advantages of the system include a contrast control to darken or lighten X-rays with random colorization available to emphasize various areas. Multiple X-rays may be viewed on a single screen, and the film may be transported electronically to other dentists or insurance companies.

"Although the system is relatively expensive for the general practitioner, I think we will eventually do away with the darkroom and chemical processing and have everything more instantaneous on an electronic system," said Dr. Weller. ■

Research Offers Insight into Autoimmune Diseases

Christine Hurley Deriso

A Medical College of Georgia researcher is studying the process that prods an immune system to attacks its body's own tissues.

When the immune system declares war not only on foreign invaders but on the body's own tissues, debilitating and sometimes deadly diseases such as lupus and scleroderma result.

Dr. Bill Dynan, Professor in the Department of Medicine and the Department of Biochemistry and Molecular Biology, is probing this process, focusing particularly on a substance called Ku protein, contained in the nucleus of each cell. Those with autoimmune diseases create antibodies to attack this protein.

But why? "The immune system should tolerate these proteins; they're normal," said Dr. Dynan, who works in MCG's Institute of Molecular Medicine and Genetics. "The immune system is responding to a normal component of the cell instead of something foreign or dangerous. That's the great puzzle in [autoimmune] diseases."

Dr. Dynan is inducing the creation of these antibodies in an animal model to better study the protein. "What is the basic function of the protein in the cell?" he said. "By learning what this protein usually does, we should get some insight into why it and not something else is attacked in a person with an autoimmune disease."

One thing known about Ku protein is that it repairs broken DNA—for instance when DNA has been damaged by radiation. Does this process harm the immune system in some people, or is the immune system already faulty, primed to attack normal protein as soon as it is activated? Dr. Dynan is trying to find out. He also is working with University of Georgia researchers to determine Ku protein's molecular structure. "We have great curiosity about this structure and how it works," he said.

Dr. Dynan also collaborates continually with MCG clinicians who treat those with autoimmune diseases. They benefit from his laboratory findings and he benefits from their clinical observations, he said, noting that this concept is pivotal to research in the Institute of Molecular Medicine and Genetics. "We're trying to break out of the box to pursue clinical implications," he said. ■

Dr. Bill Dynan with lab assistant Lisa Sease.

Dr. Goldstein Named Distinguished Alum

Christine Hurley Deriso

Dr. Barry Goldstein, Medical College of Georgia Vice President for Academic Affairs, has been named a Distinguished Alumnus for outstanding accomplishments in academia from the University of Medicine and Dentistry of New Jersey.

Dr. Goldstein, a native of Brooklyn, N.Y., earned a bachelor's degree in biology from Adelphi University in 1975 and a Ph.D. in pharmacology from the University of Medicine and Dentistry of New Jersey in 1979. He completed his postdoctoral training as a research associate at the University of Illinois School of Medicine and joined the MCG faculty in 1981.

He was named Interim Vice President for Academic Affairs in 1991 and Vice President in 1992. He also is a Professor of Pharmacology and Toxicology in MCG's Schools of Medicine and Graduate Studies, internationally recognized in the area of neuroscience research.

As Vice President for Academic Affairs, Dr. Goldstein has spearheaded electronic technology at MCG to enhance education. He has chaired the MCG Faculty Organization's Academic Council. He also has chaired the Governor's Health Care Personnel Study Commission, which presented a comprehensive plan to meet Georgia's nursing needs. He is Chairman of the State Health Planning Agency's Health Care Personnel Planning Committee.

He and wife Gail have three daughters. ■

Graduate Student Receives Award for Cancer Research

Christine Hurley Deriso

A Medical College of Georgia graduate student has received a national award for her cancer research.

Ana Marie Sanchez, who is earning her Ph.D. in the MCG Department of Biochemistry, has received an American Association for Cancer Research Minority Scholar Award in Cancer Research. Ms. Sanchez will present her research at the association's annual meeting in San Diego April 12-16.

Ms. Sanchez, originally from Manila, Philippines, is studying radiation effects on cancer cells with her mentor, Dr. Pat Schoenlein, Assistant Professor in the Department of Cell Biology and Anatomy. They are submitting their research for publication, along with their colleagues, Dr. Dave Welter in the Department of Cell Biology and Anatomy and Dr. John Barrett in radiation oncology. The researchers are studying a gene that makes cancer cells resist chemotherapy and exploring ways to bolster the survival chances of patients with this resistance, specifically by combining chemotherapy with radiation. ■

Dr. Carol Lapp presents School of Graduate Studies Distinguished Alumnus Award to Dr. David O. Wood during Homecoming 1997.

Ana Sanchez (center) in lab with Drs. Pat Schoelein and John Barrett.

Dr. Korach Named Journal Editor

Dr. Kenneth Korach, who earned a Ph.D. in endocrinology at the Medical College of Georgia in 1974, has been named editor in chief of the *Journal of Endocrinology*.

Dr. Korach is Senior Research Endocrinologist and Chief of the Receptor Biology Section at the National Institute of Environmental Health Sciences in Research Triangle Park, N.C.

After earning his Ph.D. at MCG, Dr. Korach completed a two-year postdoctoral fellowship at Harvard Medical School. He joined the National Institute of Environmental Health Sciences in 1976. He received the National Institutes of Health Outstanding Performance Award in 1988, 1989, 1990 and 1991 and the National Institutes of Health Special Service Award in 1989. He was named the MCG School of Graduate Studies' Distinguished Alumnus in 1992. ■

Doctor Called the "Heart of Swainsboro"

Christine Hurley Deriso

As a young man, Wilder Smith had no doubt that someone in his family would carry on the four-generation tradition of becoming a doctor. He just didn't expect it to be him.

He assumed his brother, George Smith II, would carry the family torch. Safe in that assumption, Wilder earned an undergraduate degree and proceeded to do just about everything but medicine, including working as a postal employee, undertaker and soda jerk.

But then his brother threw him for a loop: George went to law school. (He eventually went on to become Speaker of the Georgia House of Representatives.)

Wilder didn't hesitate to fill the void. His father, a general practitioner in Swainsboro, Ga., worked day and night and desperately needed some help. "My daddy was just about killing himself in general practice. I felt sorry for him and wanted to help."

So Wilder enrolled at the Medical College of Georgia, the alma mater of his father and grandfather. He planned to graduate in 1948 but earned his degree a year early when World War II spurred medical schools to offer an accelerated program to help fill the growing demand for doctors. After completing an internship in Jacksonville, Fla., Wilder followed the lead of generations of Smith physicians and went home to Swainsboro to hang his shingle.

"[Daddy and I] did a little of everything; it's just a small country town," Dr. Smith says. "We even did a little surgery, mostly obstetrics and pediatrics." Together, he and his father delivered more than 5,000 babies.

"Back then, our patients didn't have any money," Dr. Smith says. "We charged $6 a day for room and board at our hospital, and we charged $50 to deliver a baby. I treated all my patients alike. If they didn't have any money, we took care of them anyway."

After his father died in 1953, Dr. Smith began a partnership with Dr. C.E. Powell. The two operated the 25-bed Smith Sanitarium, later renamed Powell-Smith, which Dr. Smith sold to the county in 1968 when Dr. Powell died.

"I worked all the time—Sundays, evenings, all the time. I enjoyed what I was doing. I dealt with families and patients I had delivered and was still looking after," Dr. Smith says.

"He's got some older friends who won't see another doctor but him," notes Oliene Kirby, who has nursed Dr. Smith since he was partially disabled by a recent stroke.

Despite the stroke, Dr. Smith still works part time at the Swainsboro Rural Health Clinic, which two of his sons—both physician assistants—help him run. "My sons generally take my advice and don't try to fuss with their daddy about anything," he says with a laugh.

Cruise down Highway 1 into Swainsboro and you'll immediately see the mark Dr. Smith, 82, has made—namely his home, which he has partially opened to the public as a medical museum to display five generations of memorabilia.

"I accumulated a lot from my grandfather, my father and myself," Dr. Wilder says. "I get a kick out of looking at my collection."

That collection is a testament to the fact that "medicine has changed a good little bit," he says. "Penicillin had just been discovered when I started practicing. My father, grandfather and great-grandfather did a marvelous job, considering what they had to work with, which wasn't much.

"The practice of medicine completely changed after antibiotics. Medicine became more pleasurable; we were able to get our patients well."

He loves showing off his vast collection of medical equipment, furnishings and pharmaceuticals to friends and passers-by. But Dr. Smith, now a widower whose numerous accolades include Georgia's 1986 Family Physician of the Year Award, reserves most of his spare time for his five children and 19 grandchildren. "I'm not lonely a'tall," he says. "I've got fine children. They're more or less a product of my wife. She's really the reason the children did as well as they did."

But his friends insist he sells himself short—not only in the child-rearing department, but in general. "He's a joy to work with and a very dedicated doctor," says his nurse, Ms. Kirby. "He still gets calls from the nursing home in the middle of the night, and he sees that they get what they need. He's the heart of Swainsboro." ■

Dr. Wilder Smith in his home-turned-museum

Grant Helps Alum Reach Out to Underserved Children

Dr. Melissa McGinnis ('79), a pediatrician in Cumming, Ga., has received a grant to provide health care services, such as screenings, in area churches.

Dr. McGinnis is the first Georgia pediatrician to receive a Community Access to Child Health planning grant, funded by Wyeth-Ayerst Laboratories and awarded by the American Academy of Pediatrics.

Dr. McGinnis said several churches have agreed to host the rotating clinics.

"Forsyth County [of which Cumming is the county seat] is a paradox: It is the ninth fastest-growing county in the nation, with low unemployment and good jobs, but up to a quarter of the county's children age 5 and under do not receive adequate health care," Dr. McGinnis said. "Many families have no health care coverage at all."

The number of child immunizations, for example, recently decreased, despite a marketing campaign to increase immunizations. The infant mortality rate nearly doubled from 1993 to 1994.

"While Forsyth County as a

Dr. Roy Witherington presents 1997 School of Medicine Distinguished Alumnus Awards to Dr. James W. Bennett (left photo) and Dr. Melvin Spira

whole is not impoverished, there are geographic pockets of need," said Dr. McGinnis, who volunteers her time and staff for the pilot program.

The CATCH grant helped Dr. McGinnis identify barriers to health care access, such as lack of public transportation. She also provided the clinics with bilingual services to accommodate Forsyth County's rapidly growing Hispanic population. She hopes to eventually include hearing and vision screenings, hemoglobin tests, lead screenings, health education and other services related to child health.

"Our goal is not to replace pediatricians or family practice physicians, but to provide health care services to children and families who are not currently receiving adequate care due to language, time and transportation barriers," she said.

Dr. Thomas Tonniges, Director of the CATCH program, said, "Dr. McGinnis looks beyond her own practice to meet the needs of her larger community. The American Academy of Pediatrics is very supportive of her efforts to provide all children in Forsyth County with the healthiest possible start in life."

CATCH, whose goal is to make quality health care available for all the nation's children, uses local pediatricians to spearhead efforts in their communities to identify the health care needs of children and to find solutions. More than 500 pediatricians nationwide participate in CATCH programs. ■

Medical Student Finally Realizing His "Dream Deferred"

Christine Hurley Deriso

Harold Goodman has led such a productive and fulfilling life that not even his wife and daughter realized he had been harboring a dream since childhood.

He wanted to be a doctor.

But the dream seemed largely unattainable. Harold is black, and growing up in Chicago, he'd never met a single black doctor. And no one in his family had ever gone to college, much less medical school. He had no role models to help him visualize his dream and set it in motion.

Nevertheless, Harold forged the unprecedented path of being the first in his family to go to undergraduate school. He earned a degree from Columbus College (now Columbus State University) in Columbus, Ga., then earned a living in engineering. His career included a stint in Europe as a sound engineer for musicians performing concerts.

The work was lucrative and enjoyable, but he never lost sight of his dream. "[Medicine] was always a dream deferred," Harold says. "It always lived in the dark recesses of my mind."

Harold is quiet by nature and not inclined to share lofty dreams with others, so his wife and 10-year-old daughter were more than a little startled when he decided he'd kept his dream on hold long enough.

"I would think to myself, 'If I'd gone to medical school at such-and-such an age, I'd be a doctor by now.' I didn't want to keep thinking that, so I decided to apply. My family was a little surprised, because it wasn't something I had often talked about. But they've supported me."

Harold, age 40, just completed his first year of medical school at the Medical College of Georgia. His classwork has kept him more than a little busy, but he's found time to help cultivate the ingredient that was missing from his life. He wants to make sure black and other minority students have plenty of role models to help them achieve their dreams.

Harold is a member of the MCG Chapter of the Student National Medical Association, devoted to advancing health professions among minority and underserved populations. "We try to identify and assist undergraduates interested in the health professions," he says.

He bristles at the misconception that the group endorses giving special preference to minorities. "The focus is to increase enrollment across the state and country by helping people develop the skills necessary to be competitive," he says.

The group's members visit colleges and high schools frequently to spread the word that a health profession is an attainable goal, regardless of one's race or socioeconomic standing. Members also have held weekly sessions helping Paine College students prepare for the medical school entrance exam, and they bring speakers to campus. April 15, for instance, the group hosted Dr. Randall C. Morgan, President of the National Medical Association, who discussed health care issues of the medically underserved.

Harold says he's been delighted by the MCG administration's support of the group's efforts. "MCG has been very supportive," he says. "They've always come forward for with what we've asked for."

Harold isn't sure which direction his medical career will take, but he wants to practice in an urban area. "I think it's important to place more role models in urban communities," he says. "I didn't have a role model growing up, and I want to help make sure other children do." ■

Correction

An article in the spring edition of *AlumNews* announcing Dr. Paul E. Stanton Jr.'s appointment as President of East Tennessee State University incorrectly identified the site of his surgery residency, Georgia Baptist Medical Center in Atlanta. *AlumNews* regrets the error. ■

Dr. Lambert Elected to Board

Dr. Vickie A. Lambert, Dean of the Medical College of Georgia School of Nursing, is one of 10 nursing deans nationwide to be elected to the Board of Directors of the American Association of Colleges of Nursing.

The association, based in Washington, D.C., represents more than 500 U.S. nursing schools that offer baccalaureate, graduate and postgraduate programs. The dean or other chief administrative nurse in the nursing program serves as the institutional representative to the association.

The association helps deans and directors improve and advance nursing education, research and practice.

Dr. Lambert is a past President of the Georgia Board of Nursing and the Southern Council on Collegiate Education for Nursing. ■

Dr. Vickie A. Lambert

Nursing Faculty Edit Textbook

Christine Hurley Deriso

Medical College of Georgia School of Nursing faculty members Drs. Lenette Burrell, Mary Jo Gerlach and Betsy Pless are editors of the second edition of *Adult Nursing: Acute and Community Care* (Appleton & Lange, January 1997).

The faculty members, who teach at the nursing school's Athens campus, also wrote chapters in the 2,300-page textbook, which has 76 chapters and 13 books in a slipcase. The first book contains the introduction and 140-page index. The other 12 books cover foundation of contemporary nursing practice; nursing management of adults with cardiovascular and hematologic problems; respiratory problems; neurologic problems; endocrine problems, urinary problems; gastrointestinal problems; hepatobiliary and exocrine pancreas problems; musculoskeletal problems; reproductive problems; problems with organs of perception; and nursing management of adults with crisis problems.

Other MCG faculty who wrote chapters in the text are Julia Behr, Christine Berding, Sharon Butler, Lee Farris, Beverly George-Gay, Vickie Lambert, Patricia Lillis, Mary Ellen Quinn, Melissa Spurr and Denise Thompson. ■

Mentors Complete Training

The first group of volunteers for a Medical College of Georgia program matching young rural mothers with people who have walked in their shoes has completed its training.

Those volunteers, who live in the rural communities they will serve, will help guide young mothers and mothers-to-be and match them with community resources when necessary. The program is a component of MCG's Rural Health Outreach Program, a means of meeting health care needs, particularly for mothers and children, in medically underserved areas of Georgia.

The mentoring program, called the Rural Outreach Resource Mother's Program, addresses the fact that many young mothers, particularly in rural areas, feel overwhelmed and isolated, according to Rural Health Outreach Program Director Nancy Williamson, an Associate Professor of Nursing at MCG. Jerome Marcotte, MCG staff nurse and Resource Mother Program Coordinator, supervises training classes to help volunteers meet these young mothers' needs. The project is funded by a grant in partnership with the Empowerment for Economic Communities Program.

The first of 20 training classes began in November. The volunteers, 11 women and one man, attended twice-weekly sessions in Wrens, Ga. , learning communication skills, stress management and pregnancy-related topics.

"Our goal is to make stable prenatal care possible," said Mr. Marcotte. "We hope our resource mothers will set good examples, provide encouragement and help prevent the ever-growing problem of child abuse and neglect. One of the biggest problems we face is that 87 percent of pregnant women in our area raise their children as single parents."

"It's been rewarding for me to be able to help others and to learn more myself," said Margaret Jones, a Wadley, Ga., volunteer. "There was so much I didn't know myself because I have just one child. The films, the books have helped; everything has been a learning experience. After this course is over, I hope I can help teens to understand there's more out there than having babies."

Volunteer Glenda Smith of Sandersville, Ga., concurs. "I am one of the community sponges," said Ms. Smith. "People tell me all their problems, and I absorb the pain and suffering. People also tell me they look up to me by the way I live. By being a resource mother, I hope I can help them out."

The other graduates of the training program are Bertha Abrams of Waynesboro; Betty Battle of Warrenton; Mary Alice Cowart of Wadley; Harriett Drisdon of Midville; Gwanda Murray of Mitchell; Odell Murray of Wrens; Merlinda Neal of Thomson; and Wilhelmina Swain of Sparta. ■

Nurse Anesthetists Take Skills to Ecuador

Christine Hurley Deriso

Imagine needing an urgent, lifesaving appendectomy—but being put on indefinite hold, with perhaps fatal results.

That would have been the likely fate of an Ecuadoran woman. But her recent appendectomy proceeded quickly and successfully because a volunteer medical team happened to be on site. Most Ecuadorans don't fare nearly so well, according to a Medical College of Georgia nurse anesthetist and nurse anesthetist stu-

1997 School of Nursing Distinguished Alumna Gail C. Mornhinweg (left) receives award from SNAA President Victoria Patteson

dent who joined the team.

"When I heard about the [six-day mission trip to Ecuador], I immediately dismissed it because of time and finances," said senior nurse anesthetist student Dan McAlvin. "But I went home and told my wife about it and she said, 'So when are you leaving?'"

His wife knew he couldn't miss an opportunity to put his skills to work in a country so desperately lacking in his expertise. Indeed, Ecuadorans, whose health care is largely subsidized by the government, are so unaccustomed to adequate anesthesia that illness or injury is indelibly associated with excruciating pain. "People there think pain is part of the cure," Mr. McAlvin said.

He and MCG nurse anesthetist Rich Haas administered anesthesia for 18 surgical cases at Foundacion Hogar, a non-profit medical care facility in Cuenca, Ecuador, sponsored by Verbo Ministries. The two, who discussed their trip during a lecture at the MCG School of Nursing May 19, painted an often bleak picture of interminable waits for medical procedures in Ecuador, followed by very poor care.

Foundacion Hogar is a two-story house converted into a nine-bed hospital. The facility, while often invaluable, lacks all but the most basic health care resources. The clinic's staff is poorly educated, and concepts such as postoperative care are unheard of. Patients are largely out of luck, Mr. McAlvin said, unless they have family to tend to needs that would be handled by nurses or other professionals in the United States.

"If you don't have family," Mr. McAlvin said, "you don't have care. It's as simple as that."

The volunteer team brought many of its own supplies and medications, much of which was donated by pharmaceutical companies. But the donations didn't entirely compensate for the austere conditions. For instance, all patient beds in the facility are on the second story, and the house has no elevator. So non-ambulatory patients needing to be moved from one spot to another have to be carted up and down the stairs. Everyone in sight was enlisted at one time or another for this task, including the MCG volunteers.

But that was the least of their problems. For instance, Mr. Haas and Mr. McAlvin administered anesthesia to one man whose arm had been broken three years earlier. It had been "set" at the time, but so badly that it almost seemed to have been botched on purpose. His arm had been deformed until the volunteer team reset it, correctly this time. The team used a window as an X-ray view box.

The MCG team also described a patient with clubfeet—not an unusual congenital defect, but shocking to have gone uncorrected for 19 years. And the volunteers could only correct one of the feet. The patient, a farmer, couldn't function unless he could hobble along on at least one foot, so the second operation had to be postponed until after the first foot healed.

"In this country, a 19-year-old with an unrepaired congenital defect is unheard of," Mr. McAlvin noted.

The trip was not without its lighter moments, however. Mr. McAlvin laughs that his halting Spanish sometimes made for interesting conversation. At one point, he tried to tell a patient to open his eyes. The patient was clueless about how to respond; Mr. McAlvin had just told him to "open his bears."

Mr. Haas and Mr. McAlvin called the trip tremendously satisfying, but they stressed the importance of practical details. They advise those who go on mission trips to plan well in advance and secure as many sponsors as possible. ■

Lost Alumni

The MCG Office of Alumni Affairs is trying to get back in touch with our "lost" School of Nursing alumni and will regularly publish a list of several of them. If you have any information about their whereabouts, please contact the office toll-free at 1-800-869-1113 or, locally, 721-4001.

Duane E. Cox
Cynthia H. Coyle
Marsha A. Craig
Robin J. Crandell
Judy A. Criner
Barbara J. Crookshank
Paula J. Crump
Melissa F. Crumpler
Sharon K. Culpepper
Margaret J. Culver
Russell E. Cumberledge
Carol P. Cummings
Cameron M. Current
John Currier
Theodore W. Currier III
Annette C. Currier
Susan H. Curtis
Derek L. Curtis
Martha A. Cutshall
Marvin M. D'Angelo
Nancy N. Daley
Lisa C. Danford
Kathryn O. Daniel
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Linda D. Daniel
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Daisy H. Drayton
Susan J. Drechsel
Karen L. Drummond ■

...continued from page 7

Kandel Rohrer Award. Mr. Murdock, who graduated summa cum laude from the MCG School of Nursing in 1977, earned a master's degree in nursing with a concentration in anesthesiology from the State University of New York at Buffalo. He is Director of the MCG Department of Anesthesiology's Nurse Anesthesia Service and an Instructor in the department. He is a member of the Georgia Association of Nurse Anesthetists' Board of Directors and Sigma Theta Tau.

Dr. Gail C. Mornhinweg received the School of Nursing Alumni Association's E. Louise Grant Award. Dr. Mornhinweg earned bachelor's and master's degrees in nursing from MCG and earned a Ph.D. in educational research and measurement from the University of South Carolina. She is an adult nurse practitioner for the University of Louisville Hospital's Emergency Department and General Internal Medicine Clinic in Louisville, Ky. She also is an adult nurse practitioner for Louisville's Associates in Family Practice and is an Associate Professor in the University of Louisville School of Nursing. She is a member of Sigma Theta Tau, the American Nurses Association and the Southern Nursing Research Society. ■

Old MCG Designated as National Historic Landmark

Carole Jones Smith

The Old Medical College building, 598 Telfair St., was designated as a National Historic Landmark May 2.

Cecil McKithan, Chief of the National Register Division, National Park Service; Dr. J. Daniel Hanks, Medical College of Georgia Foundation President; and U.S. Rep. Charles W. Norwood Jr., 10th District, Georgia made special presentations during the ceremony.

National Historic Landmarks are recognized as the nation's most important historical and cultural resources. They are buildings, historical districts, structures, sites and objects that possess exceptional value and quality in illustrating or interpreting the heritage of the United States. Only 43 other properties and districts in the state and three in Richmond Country hold this distinction.

The Old Medical College was built in 1835 to house MCG, the third-oldest medical college in the Southeast. The building is referred to as the finest expression of Greek Revival in Georgia and is listed on the National Register of Historic Places. ■

Class Notes

School of Allied Health Sciences

Susan C. Verdery (Medical Technology, '85) has received the 1997 Medical College of Georgia Medical Technology Alumni Award, recognizing outstanding achievements and professional activities in the medical technology field. Mrs. Verdery is a Supervisor in the Department of Veterans Affairs Medical Center Microbiology Department. She is the eighth recipient of the award.

Celeste A. Novallo Mooney (Radiologic Science, '91), Chelsea, Mich., married Edward Mooney May 10, 1997 and honeymooned in Mexico.

School of Dentistry

Larry W. Townsend ('75), Fayetteville, N.C., announces his retirement from the Army Dental Corps October 1997 after 25 years of service. He will retire from dentistry and has been accepted to Concordia (Lutheran) Seminary in St. Louis to pursue service to God.

School of Graduate Studies

Melody S. Heffline (M.S.N., '90), Lexington, S.C., is a nurse practitioner in vascular and general surgery at Surgical Associates of South Carolina in West Columbia. She completed her acute care nurse practitioner certification in February.

Deadline for submitting information for publication in the spring issue of AlumNews is Aug. 15, 1997.

Alumni! Let us know what's new with you by taking a moment to fill out this form. Also, please send us your curriculum vitae so we can keep your files up-to-date.

☐ Male ☐ Female

Today's date

Name

Phone

School graduated from

Degree Class year

Street address

City State Zip

❑ Check if new address

Present specialty and place of practice or training

Professional news (attach additional page if needed)

Personal news (b&w photos welcome)

Please send to: Christine Deriso; Alumni Center FI-100; Medical College of Georgia; Augusta, GA 30912

School of Medicine

Dr. William E. Silver ('63) of Georgia Facial Plastic Surgery in Atlanta was a featured speaker at the American Academy of Facial Plastic and Reconstructive Surgery's fourth winter symposium in Snowmass, Colo. He delivered papers on Secondary Correction of Rhinoplasty and Functional and Cosmetic Blepharoplasty. He is the academy's Membership Committee Chairman. ■

AlumNews

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THE LEPTIN LINK

Leptin, a substance that can reduce the weight of obese mice by an astonishing 35 percent in just two weeks, also appears to play a major role in reproduction, according to research at the Medical College of Georgia.

Recently, scientists discovered that an extremely obese strain of mice lacked leptin, a naturally occurring protein in the body found only in the fat

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cells. When these mice were given very low doses of the protein, their body weight almost immediately began reverting to that of a normal mouse. Researchers at MCG are probing how leptin affects both body weight and fertility. Their findings appeared in the February edition of the scientific journal, *Neuroendocrinology*.

"Leptin decreases appetite and markedly increases metabolism," said Dr. Darrell W. Brann, Associate Professor in the MCG Department of Physiology and Endocrinology and principal investigator of the research. His colleagues are Department of Physiology and Endocrinology Chairman Virendra Mahesh and graduate student Pedro Zamorano. "Never before has anything done both very well. And we've found that giving leptin makes [obese mice] fertile; without it, they're infertile. We're finding that the fertility results not just from the weight loss. Leptin seems to be essential for reproductive function."

Dr. Brann notes that body fat and fertility are obviously closely linked. In humans, both extreme obesity and anorexia can cause infertility. The MCG researchers theorize that leptin directly affects reproductivity, a theory supported by their finding that reproductive tissues respond to leptin. Another possibility is that leptin controls levels of corticosteroids, a hormone linked to stress. "Obese mice have very high corticosteroid levels," Dr. Brann said. "They resemble a very stressed animal. And what does stress do? It can abolish reproductive function."

The MCG researchers plan to determine whether leptin levels fluctuate during the menstrual cycle, noting that levels of leptin and estrogen seem closely linked. They hypothesize that leptin may trigger puberty, which is suggested by the body's increased fat storage during that time.

But the obvious implication of leptin's seemingly enormous role—that using it in humans will spur weight loss and improve reproductivity—is iffy. "There's kind of a monkey wrench," Dr. Brann said. "What's been found is that obese humans have very high levels of leptin in their blood," unlike the obese mice, which have virtually no leptin. The researchers speculate that another protein is abnormally binding with the leptin, in effect imprisoning it and preventing it from fulfilling its appetite-suppressing, metabolism-inducing function. They want to identify and clone this suspected binding protein to test the theory.

—CHRISTINE HURLEY DERISO

DYING TO BE THIN

A substance that makes obese mice 35 percent thinner in just two weeks? It's hard to imagine a statistic that could generate more excitement.

Consider, for example, a recent survey determining that 82 percent of American teen girls want to lose weight.

But why is weight loss such a consuming pursuit in our society? And why, despite our often fanatical approach to the goal, are more Americans overweight today than at any time in U.S. history? Seldom has an ideal been so at odds with reality—which may explain society's increasingly neurotic relationship with food, according to a Medical College of Georgia psychologist.

"People have always been prejudiced toward overweight people," said Dr. Christian Lemmon, Director of the MCG Eating Disorders Program. "But certain factors, such as media images and a national obsession with health, have exacerbated it."

Impressionable adolescents, he said, are constantly bombarded with magazines, movies, music videos and television shows that glamorize extreme thinness. When that ideal proves elusive, some declare war on food and become anorexic or bulimic.

But as MCG researcher Darrell W. Brann noted, female puberty spurs an increase in body fat to prepare for eventual pregnancy, childbirth and lactation. Few women are programmed to be Twiggy thin, and those who attain it unnaturally can pay a steep price, including cessation of menses, infertility, loss of bone mass and even death.

"Young girls should know that a woman accumulates the most body fat during early adolescence, not to mention the tremendous changes in bone maturation and the development of secondary sexual characteristics," Dr. Lemmon said. "We could do a better job of educating our children."

And some people are genetically programmed to be larger than others. "There's clearly a genetic link," he said. "We can't ignore that. When we look at overweight people, not all of them are overeaters. Obese people tend to underestimate how much they consume, but there doesn't seem to be a significantly greater amount of overeating (than in the normal-weight population)."

But genetics certainly isn't the only contributor to obesity. Childhood obesity skyrocketed 54 percent between 1963 and 1980, clearly implicating societal factors such as high-fat diets and sedentary lifestyles, according to Dr. Bernard Gutin, MCG Professor of Pediatrics and Physiology. His colleagues in MCG's Georgia Prevention Institute, spearheaded by pediatric cardiologist William B. Strong, have clearly determined that unhealthy, fat-promoting patterns established in childhood lay the groundwork for diseases such as hypertension and diabetes.

So how do we balance the laudable goal of healthy weight loss with the need to accept that human beings come in all shapes and sizes?

The key, MCG specialists agree, is to instill healthy attitudes in children.

"Be a great role model," Dr. Lemmon stressed. "Eighty-one percent of 6- to 9-year-olds say their parents decide what they eat for supper. We have a lot of control over what our children eat. And we model not only by what we eat, but by how we eat."

For instance, parents who rely heavily on high-fat convenience foods miss a window of opportunity to hook their kids on fresh fruits and vegetables, according to Dr. Suzanne Domel Baxter, an MCG nutritionist. "It's important to give children a variety of experiences with food while they're young," she said. And habitually eating fast food on the run deprives children of associating mealtime with a comfortable, unhurried experience.

On the other hand, parents shouldn't be rigid about food—for instance, by declaring all high-fat food off limits. "I think it's a really bad idea to eliminate high-fat, high-calorie foods," Dr. Lemmon said. "We try to get people to eat all foods in moderation." And parents who continually diet or deprive themselves send the message that food is the enemy.

Strangely, Dr. Lemmon's chief tip for instilling healthy eating habits doesn't really have anything to do with food. His advice is to encourage children to feel confident, competent and comfortable with their emotions. Those with eating disorders, he explained, often binge or undereat when confronted with aversive emotions, such as anger or depression. Instead of reaching for the cookie jar to soothe a dispirited child, encourage the child to talk with you, take a walk, soak in a bath or write in a diary instead, Dr. Lemmon suggested—and model the behavior yourself.

And don't forget to teach your kids the time-honored truism that the inside, not the outside, is what really counts. "There's a lot that makes a person attractive other than physical appearance," Dr. Lemmon said. "That's what we try to stress." ■

—CHRISTINE HURLEY DERISO

The night is eerily quiet; the wind is the only noise. The Milky Way lights up the sky like one long fluorescent tube. Daybreak dawns with panoramic views that stretch almost to the curvature of the earth.

That's how Dr. Bill Stenstrom describes his view from the highest mountain in Africa, Mount Kilimanjaro. The 70-year-old Medical College of Georgia Professor Emeritus and former Chairman of MCG's Department of Medical Illustration scaled the 19,340-foot mountain earlier this year.

"In junior high, I had a wonderful biology teacher who talked about this snow-covered mountain located on the equator in Africa," said Dr. Stenstrom. "I was enchanted. After thinking about it for many years, I saw an ad about travel in Africa and I thought, 'By golly, if I'm ever going to do it, I'd better hurry up.'"

With his wife's support of the mountain trek, Dr. Stenstrom began fast-walking eight miles a day, training six months for his first mountain-climbing experience. His friends were not surprised.

"I was not shocked, maybe a little taken aback, when I heard about Bill's trip," said Steven J. Harrison, Chairman of MCG's Department of Medical Illustration. "He's always been a leader and trailblazer in the field of medical illustration, and he lives life to the fullest. I really admire him."

Dr. Stenstrom asked friend Bill Winn of Atlanta to join him on his trip.

"I would have loved to have gone with him, but unfortunately, I couldn't go," said Mr. Winn. "Bill's a remarkable man, and people should be more like him and his wife, Barbara. Instead of letting time get away, they both stop and make time in life to do fun things."

Dr. Stenstrom's trip began in Arusha, Tanzania, where he spotted a giraffe outside his African lodge. Off in the distance he could see baboons playing. Excited to finally be in Africa, he hurried to join the 11 other daring people from the United States at the entrance to Mount Kilimanjaro National Park.

Mount Kilimanjaro is a stratovolcano composed of erupting cinders and ash with occasional lava, although only sulfur and steam have been emitted in modern times. Various-sized boulders from earlier eruptions blanket the landscape. With three cones rising to form its summit, the mountain is near the end of a belt of 20 volcanos near the southern end of the East African Rift Valley.

"After signing in, I wondered why there were 50 or 60 natives standing around," said Dr. Stenstrom. "I found out they were hoping to be chosen as porters for the trip. I had never done any mountain-hiking before, so I guess I was naive and didn't realize what was involved in this trip. That's when I realized this was not a hike—it was an expedition."

Thirty-five porters, cooks and guides accompanied the 12 tourists. Carrying approximately 50 to 80 lbs. of the hikers' duffle bags, tents, food and water on their heads and backs, the porters marched up the trail. Tourism is the Swahili natives' primary source of income. Dressed in clothing donated by previous tourists, the men were decked out in a colorful array of Chicago

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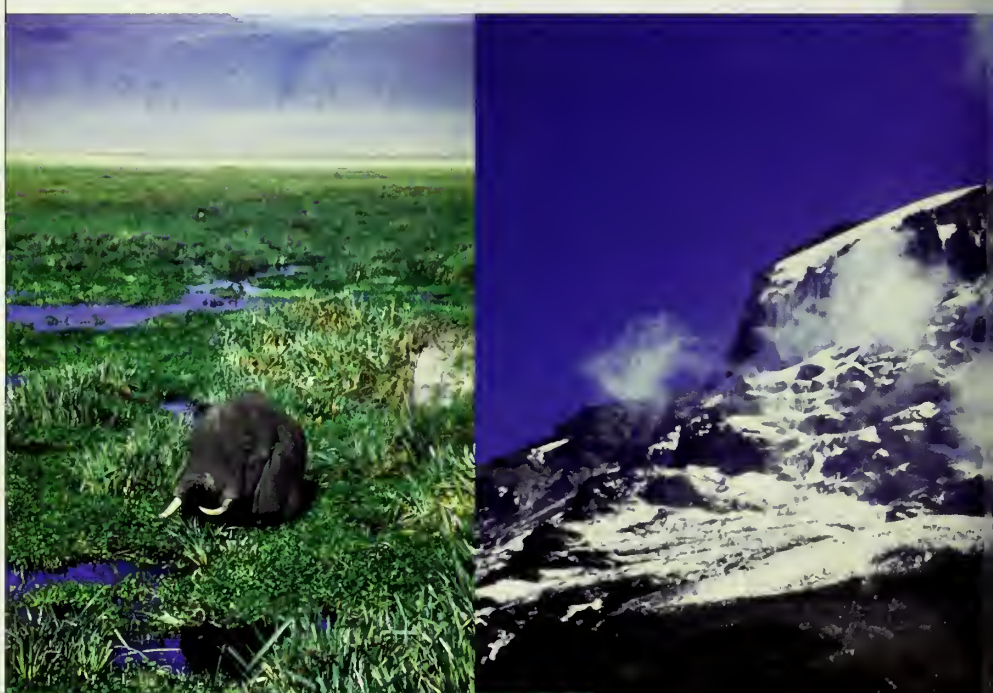

PEAK ORMANCE

Cubs T-shirts, Levi jeans and Nikes.

Led by their Oxford graduate guide, Joe Anderson, the hikers began their five-day trek up the Machame Trail into the 95-degree jungle. Hikers wore required head gear and the intense sun reflected off their protective goggles. Around noon, the lunch tent suddenly appeared in the trail complete with 12 place settings filled with delicious mushroom soup and fruits.

"It was really a class act," said Dr. Stenstrom. "Those guys didn't have two nickels to rub together, but they were a happy group of people. It sometimes made us feel guilty because obviously we had money or we wouldn't have been there."

After the 30-minute break, the group left the jungle and climbed into the rain forest filled with 6- to 8-foot heather. After ascending from 6,000 to 10,500 feet the first day, the group welcomed the site of tents and the smell of food cooking.

"The porters met us with hot coffee and popcorn as an afternoon snack," said Dr. Stenstrom. "It had been a tough day, but I knew there were tougher ones to come." Following a chicken and vegetable dinner cooked over an open fire, the exhausted group soon dispersed into individual tents.

At 6:30 a.m., porters awakened their guests with hot coffee, a pan of warm water, soap and a towel. Bacon, eggs, oatmeal, toast and jam were served shortly after, and the journey resumed around 8 a.m.

Day two began with 85-degree temperatures, falling to 55 degrees by noon. Members of the group helped each other

over the high rock ledges and boulders in the increasingly rugged terrain. Leaving the rain forest, the hikers entered in a region of giant lobelia and groundsel. Occasional waterfalls and streams from melting snow enhanced the spectacular views. The hikers added another 2,000 feet to their altitude the second day, bringing them up to 12,500 feet.

Throughout the trip, the porters kept a close watch on Dr. Stenstrom, calling him "the old man." Because of his age, the travel agency required a letter from his physician certifying his health status. Besides him, the average age of the group was 35 to 45. The hikers' occupations ranged from physician to restaurant-teur and included two married couples, two brothers, two married men and three single women.

The group reached 15,000 feet on the third day and continued on to a lower, 12,500-foot ridge for the night.The higher altitudes brought thinner air with less oxygen. After arriving at camp around 4 p.m., Dr. Stenstrom decided to nap before dinner.

"When I woke up an hour and a half later, I looked out and there was snow and hail on the ground," said Dr. Stenstrom. "I had slept through a snow and hail storm, and there was about a half an inch of snow on the ground. Talk about being tired!"

But within 30 minutes, the bad weather disappeared and the sun came back out. Such weather changes are typical on the mountain. Because of the weather and altitude, no one is allowed to climb Mount Kilimanjaro alone or without a certified guide since there are no clearly marked trails.

Heavier clothing was necessary on day four starting with a temperature of 45 degrees. Seemingly miles of giant rocks, cliffs and walls challenged the hikers as they ascended to 15,000 feet.

"We really began to feel the height," said Dr. Stenstrom. "That afternoon's climb was the most difficult thus far. The size of the walls and boulders we had to climb over seemed at times to be impossible, but by helping each other out, we managed."

Hikers are discouraged from sleeping at elevations higher than 15,000 feet due to the lack of oxygen. Therefore, to reach the summit and descend to safer altitudes by nightfall, the hikers began the next leg of their journey the same evening at 11 p.m. Facing more oxygen deprivation, three members of the group decided they had climbed high enough. With a full moon brightly shining, the remaining hikers began their final ascent.

At 18,500 feet, facing a 15-degree temperature, blowing wind and decreasing oxygen to fuel the body, the hikers' pace gradually slowed. Symptoms of altitude sickness began to affect the 70-year-old hiker.

"I started getting light-headed and a little disoriented," said Dr. Stenstrom. "I knew where I was, but I just couldn't make my feet and legs do what I wanted them to do!"

Encouraged by his guide not to give up, Dr. Stenstrom persevered for two more hours until about 8:30 a.m., when he began to lose muscle control over his legs and feet. Staggering, tripping and falling, he became unable to move forward.

"At this point, I was very afraid of falling over backward, twisting my ankle, or breaking a leg," said Dr. Stenstrom. "I realized if I continued, I would get into serious trouble."

So close to the summit, it was not a disappointment to turn around. Dr. Stenstrom's goal was to climb Mount Kilimanjaro, and he had accomplished his feat.

"We turned around and went back down," said Dr. Stenstrom. "I felt so wonderful on the way down that I knew I had made the right decision."

The trip back down took only two days—easier hiking, but harder on the knees. At a celebration dinner, the hikers chipped in and tipped the porters and guides. Dr. Stenstrom gave his watch to his porter in appreciation of his efforts.

"I would recommend the trip to everybody," said Dr. Stenstrom. "Anybody can do it."

Richard Dillenbeck, friend and former mountain guide, disagreed. "Some people don't see any reason for doing something like this," he said. "But some of us have something inside that is satisfied when we attempt the unknown. There's something fulfilling about putting one foot in front of the other hour after hour. It takes determination and courage, but perhaps determination— like the kind that Bill has—more than anything else." ■

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Diversify Your Investments

You want to raise your investment income without sacrificing safety. Start by allocating your money through a combination of cash equivalents, bonds and stocks—or their mutual fund counterparts.

You should probably keep at least 10 percent in cash equivalents such as money market funds, Treasury Bills and certificates of deposit due in a year or less. Then, if you're a conservative investor, you might hold 60 percent in bonds and 30 percent in stocks.

Or, if you're more aggressive, you could do the opposite: put 30 percent in bonds and 60 percent in stocks, perhaps gradually scaling back on stocks as you get older.

Within each classification, spread your money among various market sectors and securities. Different types of investments tend to move in different cycles, so diversify among growth stocks, value stocks and income stocks. And don't put all your money in a single industry, such as utilities, auto stocks or pharmaceuticals.

To assure cash to supplement income you need to meet your living expenses, keep enough money in cash equivalents and short-term bonds so that you can ride out a bear market for two to four years without having to sell stocks at a low ebb.

Shelter Tax-Deferred Funds as Long as You Can

The longer you can defer taking retirement distributions from qualified retirement plans, the greater will be their tax-free buildup. To cover your living expenses in the meantime, first use investment income, Social Security benefits, pension and annuity payments and any part-time earnings.

If income sources don't fully cover your expenses, you'll need to slowly draw from your principal, but do so in this order: taxable investments first (minimizing net realized capital gains), followed by tax-free investments and non-qualified tax-deferred savings.

Finally, IRAs, Keoghs and other qualified retirement funds should be used only after all other investment types have been completely consumed. For a lump-sum distribution, consider an averaging method or a tax-free rollover to an IRA. But remember: tax law generally demands that you begin pulling money out of qualified plans at the later of age 70 and a half or your retirement.

This advice is appropriate for most individuals; however, if your retirement fund is "overfunded" or you will have a taxable estate, consult your tax advisor to determine the best strategy for you.

Boost Income and Unlock Gains

Do you own long-term appreciated stocks that pay low dividends? Perhaps you'd like to sell them and re-invest the proceeds in higher-yielding securities—if you didn't have to pay a huge tax on your capital gains.

But there's an ideal way to avoid this tax trap and boost your yield: it's called a "charitable remainder trust." You receive an income for life, and, if desired, so can a survivor. Then, the remaining principal—the "charitable remainder"—will be distributed to us to support our mission.

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- If you want to remain in your home, you can still get tax benefits. Consider deeding your property to us now but retaining the right to live there for your lifetime. The charitable deduction may be less than if you move and give us your home outright, but it's significant nevertheless.

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